

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
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Application Serial Number: 10/089,292 B
Source: 1 Fw/6
Date Processed by STIC: 1/3/05

ENTERED



IFW16

RAW SEQUENCE LISTING

DATE: 01/03/2005

PATENT APPLICATION: US/10/089,292B

TIME: 15:49:58

Input Set : D:\8737_000010.ST25.txt

Output Set: N:\CRF4\01032005\J089292B.raw

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3 <110> APPLICANT: The University of Hong Kong
4      Ng, Hon Mun
6 <120> TITLE OF INVENTION: Novel HEV Antigenic Peptide and Methods
8 <130> FILE REFERENCE: 8737-000010
10 <140> CURRENT APPLICATION NUMBER: US 10/089,292B
11 <141> CURRENT FILING DATE: 2002-08-28
13 <150> PRIOR APPLICATION NUMBER: PCT/IB00/01393
14 <151> PRIOR FILING DATE: 2000-09-28
16 <150> PRIOR APPLICATION NUMBER: CA 2,283,538
17 <151> PRIOR FILING DATE: 1999-09-30
19 <160> NUMBER OF SEQ ID NOS: 18
21 <170> SOFTWARE: PatentIn version 3.3
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 642
25 <212> TYPE: DNA
26 <213> ORGANISM: Hepatitis E virus
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (1)..(642)
33 <400> SEQUENCE: 1
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35 Gln Leu Phe Tyr Ser Arg Pro Val Val Ser Ala Asn Gly Glu Pro Thr
36 1          5          10          15
38 gtt aag ctt tat aca tct gta gag aat gct cag cag gat aag ggt att      96
39 Val Lys Leu Tyr Thr Ser Val Glu Asn Ala Gln Gln Asp Lys Gly Ile
40          20          25          30
42 gca atc ccg cat gac atc gac ctc ggg gag tct cgt gta gtt att cag      144
43 Ala Ile Pro His Asp Ile Asp Leu Gly Glu Ser Arg Val Val Ile Gln
44          35          40          45
46 gat tat gac aac caa cat gag cag gac cga ccg aca cct tcc cca gcc      192
47 Asp Tyr Asp Asn Gln His Glu Gln Asp Arg Pro Thr Pro Ser Pro Ala
48          50          55          60
50 cca tcg cgc cct ttt tct gtc ctc cga gct aat gat gtg ctt tgg ctt      240
51 Pro Ser Arg Pro Phe Ser Val Leu Arg Ala Asn Asp Val Leu Trp Leu
52 65          70          75          80
54 tct ctc acc gct gcc gag tat gac cag tcc act tac ggc tct tcg acc      288
55 Ser Leu Thr Ala Ala Glu Tyr Asp Gln Ser Thr Tyr Gly Ser Ser Thr
56          85          90          95
58 ggc cca gtc tat gtc tct gac tct gtg acc ttg gtt aat gtt gcg acc      336
59 Gly Pro Val Tyr Val Ser Asp Ser Val Thr Leu Val Asn Val Ala Thr
60          100         105         110
62 ggc gcg cag gcc gtt gcc cgg tca ctc gac tgg acc aag gtc aca ctt      384
63 Gly Ala Gln Ala Val Ala Arg Ser Leu Asp Trp Thr Lys Val Thr Leu

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64      115      120      125
66 gat ggt cgc ccc ctt tcc acc atc cag cag tat tca aag acc ttc ttt      432
67 Asp Gly Arg Pro Leu Ser Thr Ile Gln Gln Tyr Ser Lys Thr Phe Phe
68      130      135      140
70 gtc ctg ccg ctc cgc ggt aag ctc tcc ttt tgg gag gca ggt act act      480
71 Val Leu Pro Leu Arg Gly Lys Leu Ser Phe Trp Glu Ala Gly Thr Thr
72 145      150      155      160
74 aaa gcc ggg tac cct tat aat tat aac acc act gct agt gac caa ctg      528
75 Lys Ala Gly Tyr Pro Tyr Asn Tyr Asn Thr Thr Ala Ser Asp Gln Leu
76      165      170      175
78 ctc gtt gag aat gcc gct ggg cat cgg gtt gct att tcc act tac acc      576
79 Leu Val Glu Asn Ala Ala Gly His Arg Val Ala Ile Ser Thr Tyr Thr
80      180      185      190
82 act agc ctg ggt gct ggt ccc gtc tct att tcc gcg gtt gct gtt tta      624
83 Thr Ser Leu Gly Ala Gly Pro Val Ser Ile Ser Ala Val Ala Val Leu
84      195      200      205
86 gcc ccc cct ccg cgc tag      642
87 Ala Pro Pro Pro Arg
88      210
91 <210> SEQ ID NO: 2
92 <211> LENGTH: 213
93 <212> TYPE: PRT
94 <213> ORGANISM: Hepatitis E virus
96 <400> SEQUENCE: 2
98 Gln Leu Phe Tyr Ser Arg Pro Val Val Ser Ala Asn Gly Glu Pro Thr
99 1      5      10      15
102 Val Lys Leu Tyr Thr Ser Val Glu Asn Ala Gln Gln Asp Lys Gly Ile
103      20      25      30
106 Ala Ile Pro His Asp Ile Asp Leu Gly Glu Ser Arg Val Val Ile Gln
107      35      40      45
110 Asp Tyr Asp Asn Gln His Glu Gln Asp Arg Pro Thr Pro Ser Pro Ala
111      50      55      60
114 Pro Ser Arg Pro Phe Ser Val Leu Arg Ala Asn Asp Val Leu Trp Leu
115 65      70      75      80
118 Ser Leu Thr Ala Ala Glu Tyr Asp Gln Ser Thr Tyr Gly Ser Ser Thr
119      85      90      95
122 Gly Pro Val Tyr Val Ser Asp Ser Val Thr Leu Val Asn Val Ala Thr
123      100      105      110
126 Gly Ala Gln Ala Val Ala Arg Ser Leu Asp Trp Thr Lys Val Thr Leu
127      115      120      125
130 Asp Gly Arg Pro Leu Ser Thr Ile Gln Gln Tyr Ser Lys Thr Phe Phe
131      130      135      140
134 Val Leu Pro Leu Arg Gly Lys Leu Ser Phe Trp Glu Ala Gly Thr Thr
135 145      150      155      160
138 Lys Ala Gly Tyr Pro Tyr Asn Tyr Asn Thr Thr Ala Ser Asp Gln Leu
139      165      170      175
142 Leu Val Glu Asn Ala Ala Gly His Arg Val Ala Ile Ser Thr Tyr Thr
143      180      185      190
146 Thr Ser Leu Gly Ala Gly Pro Val Ser Ile Ser Ala Val Ala Val Leu

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150 Ala Pro Pro Pro Arg
151          210
154 <210> SEQ ID NO: 3
155 <211> LENGTH: 34
156 <212> TYPE: DNA
157 <213> ORGANISM: Artificial
159 <220> FEATURE:
160 <223> OTHER INFORMATION: Cloning Primer ORF2Rb
162 <400> SEQUENCE: 3
163 ggcgaaatccc tagcgcgag ggggggctaa aaca 34
166 <210> SEQ ID NO: 4
167 <211> LENGTH: 2054
168 <212> TYPE: DNA
169 <213> ORGANISM: Hepatitis E virus
171 <400> SEQUENCE: 4
172 atgcgcctc ggcctatttt gctgttgctc ctcatgtttc tgcctatgct gcccgcgcca 60
174 ccgcccgtc agccgtctgg ccgcccgtcgt gggcggcgca gcggcggttc cgccggtggt 120
176 ttctggggtg accgggttga ttctcagccc ttcgcaatcc cctatatattca tccaaccaac 180
178 cccttcgccc ccgatgtcac cgctgcggcc ggggctggac ctctgtttcg ccaacccgcc 240
180 cgaccactcg gctccgcttg gcgtgaccag gccacgcgcc ccgcccgttc ctccgctcgt 300
182 agacctacca cagctggggc cgcgccgcta accgcggtcg ctccggccca tgacaccccg 360
184 ccagtgcctg atgttgactc ccgcggcgcc atcctgcgcc ggcagtataa cctatcaaca 420
186 tctcccctta cttcttcctg ggccaccggt acaaacttgg ttctatacgc cgctcctctt 480
188 agccacttc taccctcca ggacggcacc aatactcata taatggccac agaagcttct 540
190 aattatgccc agtaccgggt tgctcgtgcc acaattcgct accgcccgtt ggtccccaac 600
192 gctgttggtg gctacgccat ctccatctcg ttctggccac agaccaccac caccgccgacg 660
194 tccgttgaca tgaattcaat aacctcgacg gatgttcgta ttttagtcca gcccggcata 720
196 gcctccgagc ttgttatccc aagtgcgagc gtacactacc gtaaccaagg ttggcgctct 780
198 gttgagacct ccggggtggc ggaggaggag gccacctctg gtcttggtat gctctgcata 840
200 catggctcac ctgtaaatc ttataactaat acaccttata ccggtgccct cgggctgttg 900
202 gactttgccc tcgaacttga gttccgcaac ctaccccccg gtaataccaa cagcggggtc 960
204 tcccgttact ccagcactgc ccgtcaccgc ctctcgtcgc gtgcagatgg gactgccgag 1020
206 cttaccacca cggctgctac ccgcttcacg aaggacctct attttactag tactaatggt 1080
208 gtcggtgaga tcggccgtgg gatagcgctt accctgttta accttgctga caccctgctt 1140
210 ggcggtctac cgacagaatt gatttcgtcg gctggtggcc agctgttcta ctctcgtccc 1200
212 gtcgtctcag ccaatggcga gccgactgtt aagctttata catctgtaga gaatgctcag 1260
214 caggataagg gtattgcaat ccgcgatgac atcgacctcg gggagtctcg tgtagttatt 1320
216 caggattatg acaaccaaca tgagcaggac cgaccgacac cttccccagc cccatcgcg 1380
218 cctttttctg tcctccgagc taatgatgtg ctttggtttt ctctcaccgc tgccgagtat 1440
220 gaccagtcca cttacggctc ttcgaccggc ccagtctatg tctctgactc tgtgaccttg 1500
222 gtaaatgttg cgaccggcgc gcaggccgtt gcccggtcac tcgactggac caaggtcaca 1560
224 cttgatggtc gccccctttc caccatcaag cagtattcaa agaccttctt tgtcctgccg 1620
226 ctccgcggta agctctcctt ttgggaggca ggtactacta aagccgggta cccttataat 1680
228 tataacacca ctgctagtga ccaactgctc gttgagaatg ccgctgggca tcgggttget 1740
230 atttccactt acaccactag cctgggtgct ggtcccgtct ctatttccgc ggttgctggt 1800
232 ttagcccccc actccgcgct agcattgctt gaggatacca tggactaccc tgcccgcgcc 1860
234 catactttcg atgacttctg cccggagtgc cgcccccttg gcctccaggg ctgtgctttt 1920
236 cagtctactg tcgctgagct tcagcgctt aagatgaagg tgggtaaaac tcgggagtta 1980

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238 tagttttatatt gcttgtgccc cccttctttc tgttgcttat ttctcttttc tgcgttccgc 2040
240 gctccctgaa aaaa 2054
243 <210> SEQ ID NO: 5
244 <211> LENGTH: 370
245 <212> TYPE: DNA
246 <213> ORGANISM: Hepatitis E virus
248 <400> SEQUENCE: 5
249 tgaataacat gtcttttgct gcgcccattg gttcgcgacc atgcgccctc ggcctatttt 60
251 gctgttgctc ctcatgtttc tgcctatgct gcccgcgcca ccgcccggtc agccgtctgg 120
253 ccgccgtcgt gggcggcgca gcggcggttc cgccgggtgt ttctgggggtg accgggttga 180
255 ttctcagccc ttcgcaatcc cctatatcca tccaaccaac cccttcgccc cgatgtcacc 240
257 gctgcggccg gggctggacc tcgtgttcgc caaccgccc gaccactcgg ctccgcttgg 300
259 cgtgaccagg ccagcgccc cgccgttgcc tcacgtcgta gacctaccac agctggggcc 360
261 gcgccgctaa 370
264 <210> SEQ ID NO: 6
265 <211> LENGTH: 114
266 <212> TYPE: DNA
267 <213> ORGANISM: Hepatitis E virus
270 <220> FEATURE:
271 <221> NAME/KEY: CDS
272 <222> LOCATION: (1)..(114)
274 <400> SEQUENCE: 6
275 gac ctc gtg ttc gcc aac ccg ccc gac cac tcg gct ccg ctt ggc gtg 48
276 Asp Leu Val Phe Ala Asn Pro Pro Asp His Ser Ala Pro Leu Gly Val
277 1 5 10 15
279 acc agg ccc agc gcc ccg ccg ttg cct cac gtc gta gac cta cca cag 96
280 Thr Arg Pro Ser Ala Pro Pro Leu Pro His Val Val Asp Leu Pro Gln
281 20 25 30
283 ctg ggg ccg cgc cgc taa 114
284 Leu Gly Pro Arg Arg
285 35
288 <210> SEQ ID NO: 7
289 <211> LENGTH: 37
290 <212> TYPE: PRT
291 <213> ORGANISM: Hepatitis E virus
293 <400> SEQUENCE: 7
295 Asp Leu Val Phe Ala Asn Pro Pro Asp His Ser Ala Pro Leu Gly Val
296 1 5 10 15
299 Thr Arg Pro Ser Ala Pro Pro Leu Pro His Val Val Asp Leu Pro Gln
300 20 25 30
303 Leu Gly Pro Arg Arg
304 35
307 <210> SEQ ID NO: 8
308 <211> LENGTH: 22
309 <212> TYPE: DNA
310 <213> ORGANISM: Artificial
312 <220> FEATURE:
313 <223> OTHER INFORMATION: RT Primer E3R
315 <400> SEQUENCE: 8

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Input Set : D:\8737_000010.ST25.txt

Output Set: N:\CRF4\01032005\J089292B.raw

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316 cgggggagtca acatcaggca ct 22
319 <210> SEQ ID NO: 9
320 <211> LENGTH: 24
321 <212> TYPE: DNA
322 <213> ORGANISM: Artificial
324 <220> FEATURE:
325 <223> OTHER INFORMATION: RT Primer E5R
327 <400> SEQUENCE: 9
328 aagcaaataa actataactc ccga 24
331 <210> SEQ ID NO: 10
332 <211> LENGTH: 34
333 <212> TYPE: DNA
334 <213> ORGANISM: Artificial
336 <220> FEATURE:
337 <223> OTHER INFORMATION: Cloning Primer ORF2F
339 <400> SEQUENCE: 10
340 gctggatccc agctgttcta ctctcgtccc gtcg 34
343 <210> SEQ ID NO: 11
344 <211> LENGTH: 30
345 <212> TYPE: DNA
346 <213> ORGANISM: Artificial
348 <220> FEATURE:
349 <223> OTHER INFORMATION: Cloning Primer ORF2Ra
351 <400> SEQUENCE: 11
352 ggcgaattcc aaataaacta taactccccga 30
355 <210> SEQ ID NO: 12
356 <211> LENGTH: 30
357 <212> TYPE: DNA
358 <213> ORGANISM: Artificial
360 <220> FEATURE:
361 <223> OTHER INFORMATION: Cloning Primer ORF3F
363 <400> SEQUENCE: 12
364 ccgggatccg acctcgtgtt cgccaacccg 30
367 <210> SEQ ID NO: 13
368 <211> LENGTH: 31
369 <212> TYPE: DNA
370 <213> ORGANISM: Artificial
372 <220> FEATURE:
373 <223> OTHER INFORMATION: Cloning Primer ORF3R
375 <400> SEQUENCE: 13
376 caggaattcc ttagcggcgc ggccccagct g 31
379 <210> SEQ ID NO: 14
380 <211> LENGTH: 21
381 <212> TYPE: DNA
382 <213> ORGANISM: Artificial
384 <220> FEATURE:
385 <223> OTHER INFORMATION: PCR Primer A3R
387 <400> SEQUENCE: 14
388 ggctcaccgg agtgtttctt c 21

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/03/2005
PATENT APPLICATION: US/10/089,292B TIME: 15:49:59

Input Set : D:\8737_000010.ST25.txt
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,8,9,10,11,12,13,14,15,16,17

VERIFICATION SUMMARY

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PATENT APPLICATION: **US/10/089,292B**

TIME: 15:49:59

Input Set : D:\8737_000010.ST25.txt

Output Set: N:\CRF4\01032005\J089292B.raw